



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,126	03/11/2004	Avi Kopelman	25537Y	4668

7590

03/16/2005

Gary M. Nath  
NATH & ASSOCIATES PLLC  
1030 15th Street, N.W. - 6th Floor  
Washington, DC 20005

EXAMINER
----------

WILSON, JOHN J

ART UNIT	PAPER NUMBER
----------	--------------

3732

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

571

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/797,126		KOPELMAN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	John J. Wilson		3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-12, 14-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapoulaud et al (2002/0025503). Chapoulaud shows obtaining a three dimensional virtual representation of teeth, 33 and Fig. 1, with brackets placed on the teeth, Figs. 5E-5G, and from several viewpoints as shown, displays of the teeth with brackets as shown in the screen shots. The screen shots inherently show three dimensional qualities. Chapoulaud shows using the display in a method of forming jigs that provide guidance for proper positioning of the brackets, and thereby, shows a display that is used as for proper positioning of the brackets as claimed. As to claim 2, the shown viewpoints, top of Figs 5E and 5F, are inherently capable of being a viewpoint from which a bracket can be applied. As to claim 8, see paragraph [0017].

Claims 1, 2, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Doyle et al (5879158). Doyle shows obtaining a virtual image 14 with brackets 29-31 on a display. The shown viewpoint is inherently a defined viewpoint. The shown drawings, and

disclosure of the relative movement of teeth, brackets and arch wires, inherently shows and teaches three dimensional qualities. Doyle shows using the display in a method of forming jigs that provide guidance for proper positioning of the brackets, and thereby, shows a display that is used as for proper positioning of the brackets as claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapoulaud et al (2002/0025503) in view of Hamilton (6413083). Chapoulaud shows the elements as described above, however, does not show the use of a printer. Hamilton teaches using a printer 108. It would be obvious to one of ordinary skill in the art to modify Chapoulaud to include printing information as is well known and shown and suggested by Hamilton in order to make use of known ways of communicating in the art.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapoulaud et al (2002/0025503) in view of Sachdera et al (6350120). Chapoulaud shows the elements as described above, however, does not show the use of a database of virtual brackets. Sachdera teaches using a library of virtual brackets, column 6, lines 25-31. It would be obvious to one of

ordinary skill in the art to modify Chapoulaud to include using a database of virtual brackets as shown by Sachdera in order to better simulate the brackets intended to be placed on the teeth.

Claims 2-4, 6, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5879158). There are many viewpoints that are capable of functioning as a viewpoint from which a bracket may be applied, and as such, the shown viewpoints of Doyle can obviously be viewpoints from which a bracket may be applied. As to claim 3, Doyle shows several viewpoints, Figs. 1 and 2. As to claim 4, Doyle shows displaying sets of teeth as shown in the drawings.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5879158) in view of Hamilton (6413083). Doyle shows the elements as described above, however, does not show the use of a printer. Hamilton teaches using a printer 108. It would be obvious to one of ordinary skill in the art to modify Doyle to include printing information as is well known and shown and suggested by Hamilton in order to make use of known ways of communicating in the art.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5879158) in view of Chishti et al (6227850). Doyle teaches the elements as described above, however, does not show transmitting data to a remote location. Chishti teaches using a remote location, column 14, lines 35-45. It would be obvious to one of ordinary skill in the art to

modify Doyle to include using a remote location as shown by Chishti in order to more conveniently provide orthodontic planning.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5879158) in view of Sachdera et al (6350120). Doyle shows the elements as described above, however, does not show the use of a database of virtual brackets. Sachdera teaches using a library of virtual brackets, column 6, lines 25-31. It would be obvious to one of ordinary skill in the art to modify Doyle to include using a database of virtual brackets as shown by Sachdera in order to better simulate the brackets intended to be placed on the teeth.

Claims 1-6, 9, 11, 12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731). Taub shows a virtual image of teeth, at least one having a bracket thereon, Fig. 4B. Taub does not show displaying in three dimensions. Jordan teaches displaying in three dimensions, column 8, lines 50-53. It would be obvious to one of ordinary skill in the art to modify Taub to include displaying in three dimensions in order to better view the teeth and orthodontic elements. The display is used in a method of calculating the proper placement of the brackets on the teeth, and as such, meets the claim language. To use different viewpoints is an obvious matter of choice in views used to one of ordinary skill in the art. To use different sets of teeth is an obvious matter of choice in the teeth it is desired to work on to the skilled artisan. As to claim 5, Taub is used to help place brackets, to display in order of bracket placement would be obvious to one of ordinary skill in the art.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731) and further in view of Hamilton (6413083). The above combination shows the elements as described above, however, does not show the use of a printer. Hamilton teaches using a printer 108. It would be obvious to one of ordinary skill in the art to modify the above combination to include printing information as is well known and shown and suggested by Hamilton in order to make use of known ways of communicating in the art.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731), and further in view of Chishti et al (6227850). The above combination teaches the elements as described above, however, does not show transmitting data to a remote location. Chishti teaches using a remote location, column 14, lines 35-45. It would be obvious to one of ordinary skill in the art to modify the above combination to include using a remote location as shown by Chishti in order to more conveniently provide orthodontic planning.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731), and further in view of Sachdera et al (6350120). The above combination shows the elements as described above, however, does not show the use of a database of virtual brackets. Sachdera teaches using a library of virtual brackets, column 6, lines 25-31. It would be obvious to one of ordinary skill in the art to modify the above

combination to include using a database of virtual brackets as shown by Sachdera in order to better simulate the brackets intended to be placed on the teeth.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,334,772 in view of Doyle et al (5879158). The claims of the '772 patent teach using a display to guide the position of brackets onto teeth, however, do not claim using virtual three-dimensional images. Doyle teaches using virtual three-dimensional images for mounting brackets. It would be obvious to one of ordinary skill in the art to modify the claims of the '772 patent to include using virtual three-dimensional images in order to better view the position of the brackets on the teeth.

### ***Response to Arguments***

Applicant's arguments filed January 21, 2005 have been fully considered but they are not persuasive. With respect to the use of the Chapoulaud reference, the rejection is being made



under 35 U.S.C. 102(e), and therefore, the filing date of Chapoulaud, August 28, 2001, is the date being used, also see 35 U.S.C. 122.

The newly added limitation reads as broadly as using a display in any method for the purpose of guiding brackets, and as such, is properly met by the applied references.

### ***Conclusion***

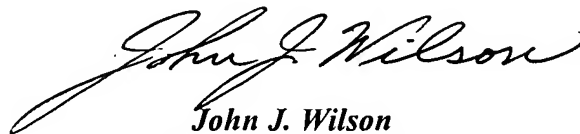
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Wilson whose telephone number is 571-272-4722). The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver, can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**John J. Wilson**  
**Primary Examiner**  
**Art Unit 3732**

jjw  
March 11, 2005